

Application No. 10/589,146  
Paper Dated: May 5, 2010  
In Reply to USPTO Correspondence of November 5, 2009  
Attorney Docket No. 0115-062349

### **REMARKS**

The Office Action of November 5, 2009, has been reviewed and the Examiner's comments carefully considered. Claims 31-37 are amended and new claims 41-51 are presented by way of this Amendment. Accordingly, claims 31-51 are currently pending for examination in this application, with claims 31 and 34 being in independent form, claims 20-30 being previously withdrawn, and claims 1-19 being previously cancelled. Support for the amendments can be found in Figs. 1, 4 and 5a-5f, at page 6, line 18 to page 7, line 9 of the specification, at page 9, line 17 to page 13, line 5 of the specification, and in original claims 1-19.

#### **Rejections Under 35 U.S.C. §112, second paragraph:**

Claims 34 and 35 stand rejected under 35 U.S.C. §112, second paragraph for being unclear due to certain informalities.

With respect to claim 34, the Office Action states that the claim is presented in a narrative form and does not positively set forth the claim limitations. Claim 34 has been amended in accordance with standard United States patent practice to remove the extraneous transitional phrases and to positively recite the claimed limitations.

With respect to claim 35, the limitation as to "a first delivery means" has been replaced with "a first delivery mechanism" to remove the means-plus-function claim language. The limitation as to "a second delivery means" has been deleted.

In view of the foregoing amendments and remarks, Applicant respectfully requests that these rejections be withdrawn.

#### **Rejection Under 35 U.S.C. §103(a):**

Claims 31-40 stand rejected under 35 U.S.C. §103(a) for obviousness over United States Patent No. 5,579,810 to Ramsey et al. (hereinafter "Ramsey"), in view of United States Patent No. 6,845,861 to Spatafora (hereinafter "Spatafora"). In view of the foregoing amendments and the following remarks, reconsideration and withdrawal of these rejections are respectfully requested.

Independent claims 31 and 34 have been amended to clarify that one spring at a time is supplied to the lower delivery point and that the position of the lower delivery point is changeable with respect to a spring conveyor, such that the next spring can be transferred to the spring conveyor at a different position along the spring conveyor to form a row of individually supplied springs.

Independent claim 31, as amended, defines a method for forming rows of springs that includes the steps of: supplying the springs individually one at a time and delivering the springs individually at a lower delivery point to a spring conveyor in which said row of springs is formed; and changing the relative position of the lower delivery point with respect to the spring conveyor for a further spring to be supplied to the spring conveyor.

Independent claim 34, as amended, defines a spring-transporting apparatus that includes a conveyor adapted to form a row of springs; a transfer device adapted to supply springs individually one at a time to the spring conveyor; and a change unit defining a lower delivery point. The transfer device transfers only one single spring at a time to said lower delivery point. The change unit transfers said spring from said lower delivery point to the spring conveyor. The springs are arranged in a row and behind another at selectable distances from one another on the spring conveyor. The relative position of the change unit, with respect to the spring conveyor, is changeable so that the relative position of the lower delivery point to the spring conveyor is changeable to arrange said springs at selectable distances from one another on the spring conveyor.

Applicant submits that Ramsey and Spatafora, taken separately or combined, fail to teach or suggest the subject matter of claims 31 and 34, as amended.

Ramsey teaches a coil spring interior assembly method and apparatus. According to the embodiment shown in FIGS. 5-5B, a coil assembly machine (50) includes two separate coilers (56a, 56b) that supply coil springs (54a, 54b) to an assembler (55) via respective discharge conveyors (57a, 57b). The discharge conveyors (57a, 57b) intersect at a crossover station (65) where the springs (54a, 54b) are transferred from the discharge conveyors (57a, 57b) to a transfer conveyor (51) by bottom (66) and top (67) pushers, which are actuated to extend to push respective springs (54a, 54b) from within the respective discharge conveyors (57a, 57b) to

within the transfer conveyor, as shown in FIG. 5A. A controller (59) operates to actuate the pushers (66, 67) to affect the order and grouping of the coil springs (54a, 54b) as they are transferred to the transfer conveyor (51). Please note FIGS. 5-5B and column 9, line 9 to column 12, line 15 of the Ramsey patent.

Spatafora is cited in the Office Action for the teaching of a carriage (19) movable along overlapping portions of two conveyors (4, 5) for packets (2) moving at different rates. The carriage (19) includes a bottom appendix (20) with a rotating deflecting member (21) with blades (28) that transfer the packets from the first conveyor (4) to the second conveyor (5). The carriage (19) is movable along a guide (18) by a belt (24) wrapped around pulleys (25). The carriage (19) moves within the overlapping area (T) of the conveyors (4, 5) to create different spacing between the packets (2) as they are transferred to the second conveyor (5). Please note FIGS. 1-3 and column 2, line 4 to column 4, line 8.

As shown in FIGS. 5-5B, Ramsey teaches that multiple springs are supplied at a time from the coilers (56a, 56b) to the discharge conveyors (57a, 57b). The springs are then continuously transferred from the discharge conveyors (57a, 57b) to the transfer conveyor (51) by the pushers (66, 67). Accordingly, Ramsey does not teach or suggest the step of supplying springs individually one at a time and delivering the springs individually at a lower delivery point to a spring conveyor, as is claimed in claim 31, or a transfer device that supplies springs individually one single spring at a time to a lower delivery point, as is claimed in claim 34.

Spatafora teaches that packets (2) are continuously supplied along the first belt (4) to the deflecting member (21), such that a line of packets (2) is formed on the belt (4), as shown in FIG. 2. Accordingly, Spatafora also fails to teach or suggest supplying springs individually one at a time and delivering the springs individually at a lower delivery point to a spring conveyor, as is claimed in claim 31, or a transfer device that supplies springs individually one single spring at a time to a lower delivery point, as is claimed in claim 34. Therefore, Spatafora fails to fairly suggest a modification to the assembly taught by Ramsey that achieves the invention claimed in independent claims 31 and 34. Rather, an assembly, according to the combined teachings of Ramsey and Spatafora, would have a continuous supply of multiple springs at the lower delivery point, thereby making it difficult for a change unit to move relative

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to the spring conveyor to properly arrange springs with the proper spacing along the spring conveyor.

For the foregoing reasons, Applicant submits that independent claims 31 and 34, as amended, are allowable, as the teachings of the prior art of record, including Spatafora, fail to overcome the above-noted deficiencies in the teachings of Ramsey. Applicant respectfully requests that the rejections of claims 31 and 34 be withdrawn.

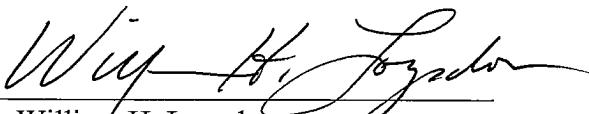
Claims 32, 33, and 46-51 are dependent upon and add further limitations to independent claim 31. Claims 35-45 are dependent upon and add further limitations to independent claim 34. These claims are allowable for at least the same reasons discussed above in connection with claims 31 and 34.

**Conclusion:**

In view of the above amendments and remarks, reconsideration of the rejections and allowance of pending claims 31-51 are respectfully requested.

Respectfully submitted,  
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By \_\_\_\_\_



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